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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,657	07/15/2003	Shigetoshi Ippoushi	402709	5280

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EXAMINER

MCKINNON, TERRELL L

ART UNIT PAPER NUMBER

3743

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

JP

Office Action Summary	Application No. 10/618,657	Applicant(s) IPPOUSHI ET AL.	
	Examiner Terrell L Mckinnon	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Receipt is acknowledged of applicant's amendment filed February 25, 2005.

Claims 1-19 are pending and an action on the merits is as follows.

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 15, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohashi et al. (JP 6-120384).

Ohashi discloses a heat transport device comprising all of the applicant's claimed and disclosed limitations of the instant invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohashi et al. (JP 6-120384) in view of Tsenter et al. (U.S. 6,425,440).

Ohashi's invention discloses all of the claimed limitations from above except for the liquid is a combination of immiscible liquids having different boiling points, the liquid with a lower boiling point is sealed in one of the terminal portions of the container, and the liquid with the higher boiling point is sealed in a portion of the container different from the terminal portion containing the lower boiling point liquid; and a pore producing capillary action located inside at least one of the terminal portions of the container where the driving heat exchangers are located.

5. However, Tsenter teaches the use of a liquid being a combination of immiscible liquids having different boiling points, the liquid with a lower boiling point is sealed in one of the terminal portions of the container, and the liquid with the higher boiling point is sealed in a portion of the container different from the terminal portion containing the lower boiling point liquid; and a pore producing capillary action located inside at least one of the terminal portions of the container where the driving heat exchangers are located.

Given the teachings of Tsenter, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat transport device of Ohashi with the liquid being a combination of immiscible liquids having different boiling points, the liquid with a lower boiling point is sealed in one of the terminal portions of the container, and the liquid with the higher boiling point is sealed in a portion of the container different from the terminal portion containing the lower boiling point liquid; and

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a core (30) producing capillary action located inside at least one of the terminal portions of the container where the driving heat exchangers are located (abstract).

Doing so would provide a thermally efficient driving means for transporting a working fluid.

6. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohashi et al. (JP 6-120384) in view of Tsenter et al. (U.S. 6,425,440) As applied to claims above, and further in view of Ohashi et al. (JP 7-286788).

Ohashi's invention, as modified by Tsenter, discloses all of the claimed limitations from above except for the fluid channel being a meandering fluid channel.

7. However, Ohashi teaches the use of a meandering fluid channel.

Given the teachings of Ohashi, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the heat transport device of Ohashi with a meandering fluid channel.

Doing so would improve the working fluids heat transferring capability.

Allowable Subject Matter

8. Claims 7, 9, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed February 25, 2005 have been fully considered but

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they are moot in view of the above-mentioned Non-Final Rejection.

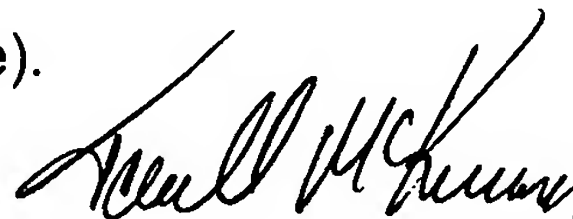
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references cited on the USPTO 892 discloses related limitations of the applicant's claimed and disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terrell L Mckinnon
Primary Examiner
Art Unit 3743
May 16, 2005